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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/643,123	08/18/2003	Frank Yauchee Hui	Huang 4-5/075903-222	3499
29391	7590	09/09/2004	EXAMINER	
BEUSSE BROWNLEE WOLTER MORA & MAIRE, P. A.			QUINTO, KEVIN V	
390 NORTH ORANGE AVENUE			ART UNIT	
SUITE 2500			PAPER NUMBER	
ORLANDO, FL 32801			2826	

DATE MAILED: 09/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/643,123

Applicant(s)

HUI ET AL.

Examiner

Kevin Quinto

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 June 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 20 is/are allowed.
- 6) ☒ Claim(s) 1-4, 7, 11, 12 and 15-19 is/are rejected.
- 7) ☒ Claim(s) 5-6, 8-10, 13, and 14 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments filed June 23, 2004, concerning claims 1-4, 7, 11, 12, and 15-19 have been fully considered but they are not persuasive.
2. With regard to the discussion of the Lovett reference, the applicant states that Lovett does not disclose a "method for identifying an integrated circuit device" and "associating the oscillating frequency with the integrated circuit device to identify the integrated circuit device according to the determined oscillating frequency." However Lovett makes it clear that the oscillating frequency is determined for each die (column 3, lines 5-15). Furthermore the action that Lovett takes when the data for each die is stored on a disk and can be sorted (column 3, lines 5-15) is an identifying process. Therefore the rejection made under Lovett stands.
3. With regard to the discussion of the Dunn reference, the applicant states that Dunn does not disclose a "frequency identifier that can be determined to correlate the die with a wafer." However Dunn makes it clear that the frequency for the ring oscillators of each die is associated with its location on the wafer, thereby correlating the die to the wafer (column 5, lines 47-49, column 6, lines 2-3, column 6, lines 28-32 and 65-66, claims 3, 10, and 17). Thus the rejection of claims 15-19 stands.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-4, 7, 11, and 12 are rejected under 35 U.S.C. 102(e) as being anticipated by Lovett (USPN 6,664,799 B2).

6. In reference to claims 1, 2, and 7, Lovett (USPN 6,664,799 B2) discloses a similar method. Figure 1 of Lovett discloses an integrated circuit device (a die, not numerically labeled) having a frequency marker device (7, the oscillator). Lovett discloses that power is applied to the frequency marker device, the oscillating frequency of the frequency marker device is determined, and this oscillating frequency is associated with the integrated circuit device (column 3, lines 5-15). Lovett also discloses that the oscillator data for each die or wafer is stored on a disk (column 3, lines 15-30); thus meeting the limitation regarding the identifying process according to the determined oscillating frequency.

7. With regard to claims 3 and 4, Lovett makes it clear that the devices are formed on a wafer and that the frequency may be associated with a particular wafer or wafer lot (column 3, lines 15-23).

8. In reference to claims 11 and 12, Lovett (USPN 6,664,799 B2) discloses a similar manufacturing method. Figure 1 of Lovett discloses an integrated circuit device (a die, not numerically labeled) having a frequency marker device (7, the oscillator). Each die comprises a semiconductor device. Lovett discloses that power is applied to the frequency marker device, the frequency of the frequency marker device is determined, and this frequency is associated with the integrated circuit device (column 3, lines 5-15). Lovett discloses that makes it clear that this frequency is associated with the die after singulation (column 3, lines 15-23). Lovett also discloses that the oscillator data for each die or wafer is stored on a disk (column 3, lines 15-30); thus meeting the limitation regarding the identifying process according to the determined oscillating frequency.

9. Claims 15-19 are rejected under 35 U.S.C. 102(e) as being anticipated by Dunn et al. (USPN 6,463,570 B1).

10. With regard to claims 15-17, Dunn et al. (USPN 6,463,570 B1, hereinafter referred to as the "Dunn" device) discloses a die which meets the claim. Figure 1B of Dunn discloses a frequency identifier (a ring oscillator) which is to be used on each die. Dunn states that the frequency may be associated with the location of the die on the wafer, thereby correlating the die to the wafer (column 5, lines 47-49, column 6, lines 2-3, column 6, lines 28-32 and 65-66, claims 3, 10, and 17).

11. In reference to claim 18, Dunn makes it clear that the ring oscillator, in figure 2A, uses an odd numbered plurality of serially connected inverter elements and a feedback loop supplying the an output signal of a last one of the serially connected inverters to an input of another one of the serially connected inverters (column 4, lines 2-3).

12. In reference to claim 19, Dunn discloses that the frequency can be associated with process steps (column 6, lines 28-32).

***Allowable Subject Matter***

13. Claim 20 is allowed.

14. Claims 5-6, 8-10, 13, and 14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

15. The following is a statement of reasons for the indication of allowable subject matter: the examiner is unaware of any prior art which teaches the oscillation frequency identification method for a failed integrated circuit device as suggested by the applicant.

***Conclusion***

16. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Quinto whose telephone number is (571) 272-1920. The examiner can normally be reached on M-F 8AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan Flynn can be reached on (571) 272-1915. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KVQ

  
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